DIINNO

DDZ285

Single-phase meter, three-point mounting – modern metering device (mME), MID class A



The DDZ285 is a single-phase meter for three-point mounting according to DIN 43857-2 and a modern metering device (mME) within the meaning of the German Metering Point Operation Act (MsbG). It measures active energy with direct connection up to 60 A – depending on type as a consumption, feed-in or bidirectional meter – and provides the values relevant to legal metrology via the optical INFO interface and the two-line LC display. It is connected to a Smart Meter Gateway via the MSB interface in combination with the BAB-01 communication adapter, which provides the LMN interface.

230 V
Single-phase (1p2w), 50 Hz

0.25–5 (60) A
Imin–Ib (Imax), direct connection

Class A
MID, EN 50470-1/-3

IP51
Degree of protection, M1 / E2

Type code

Position	Characteristic	Value
DDZ285	Design	Single-phase meter, three-point mounting according to DIN 43857-2
2nd position	Energy direction	B: consumption · L: feed-in · Z: bidirectional · S: feed-in, net metering
3rd position	Tariff	E: single tariff · D: dual tariff
4th position	MSB interface	B: RS485 · C: RS232
5th position	Accuracy	A: class A

Example: DDZ285-ZDBA = bidirectional meter, dual tariff, RS485 MSB interface, class A.

Ordering information

Type	Energy direction	Tariff (factory setting)	MSB interface
DDZ285-BEBA	Consumption (+A)	Single tariff	RS485
DDZ285-BDBA	Consumption (+A)	Dual tariff	RS485
DDZ285-LEBA	Feed-in (–A)	Single tariff	RS485
DDZ285-LDBA	Feed-in (–A)	Dual tariff	RS485
DDZ285-ZEBA	Bidirectional (+A / –A)	Single tariff	RS485
DDZ285-ZDBA	Bidirectional (+A / –A)	Dual tariff	RS485

These types are listed in EU type-examination certificate 0120/SGS0338, each also with RS232 MSB interface (4th position C) – on request, also connectable via BAB-01. Net-metering version (2nd position S) on request. The energy direction is permanently configured at the factory. Packaging unit: on request.

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Technical data

Electrical and metrological data

Connection type	Single-phase two-wire (1p2w), direct connection
Nominal voltage	230 V
Operating voltage	70–120 % Un (161–276 V)
Frequency	50 Hz
Current Imin–Ib (Imax)	0.25–5 (60) A
Starting current	0.004 × Ib = 0.02 A
Transitional current (Itr)	10 % × Ib = 0.5 A
Error limits	±1.5 % (0.25 A ≤ I < 0.5 A, PF = 1) · ±1.0 % (0.5 A ≤ I ≤ Imax, PF = 0.5 ind. / 1.0 / 0.8 cap.)
Measuring accuracy	Class A (EN 50470-1/-3) or class 2.0 (IEC 62053-21)
Impulse withstand voltage	6 kV (IEC 62052-11)
Short-circuit withstand	30 × Imax (IEC 62053-21)
Power consumption	Current path < 0.2 VA · voltage path < 0.5 W
LED pulse output	1,000 or 10,000 imp/kWh (infrared, test LED)
Mechanical environment	M1

Terminals

Main current 1, 3, 4, 6	Ø 6.5 mm · 4–25 mm² · 1.5–2.5 Nm · PZ2, M5
Voltage/N 2, 5	Ø 3.0 mm · 1.5–2.5 mm² · 0.5 Nm · M3
Auxiliary 13, 15, 27, 28	Ø 3.0 mm · 1.5–2.5 mm² · 0.5 Nm · M3
Conductors	Copper or aluminium (tin-plated copper shunts)

Display and operation

LC display	Two-line · viewing angle 15° (above), 60° (other directions)
Digit size	Value field min. 3.5 × 8 mm · code field min. 1.9 × 4.2 mm
Registers +A	Single tariff 1.8.0 · dual tariff 1.8.1 / 1.8.2
Registers −A	2.8.0
Operation	Push button, optical button depending on version · additional displays via PIN

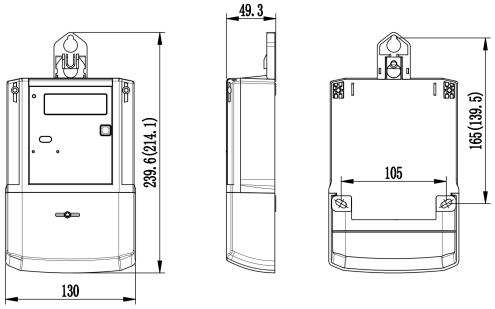
Environmental conditions and mechanics

Temperature range	−25 °C … +55 °C (operation) · −40 °C … +70 °C (storage)
Relative humidity	95 % non-condensing, < 75 % annual average (IEC 62052-11, EN 50470-1, IEC 60068-2-30)
Electromagnetic environment	E2
Protection (IP / class)	IP51 · protection class II
Housing material	Cover PC · base PC + GF (glass-fibre reinforced)
Terminal block	DIN 43857 Part 1
Dimensions (H × W × D)	239 × 130 × 49.3 mm
Weight	Approx. 620 g
Sealing	2 meter cover seals and 2 terminal cover seals
Service life	20 years (according to SN 29500)

Accessories

BAB-01	Communication adapter for secure connection to the Smart Meter Gateway according to BSI TR-03109
Terminal cover	Transparent terminal cover with integrated BAB-01, supplied as a set

Dimensional drawing



Dimensions in mm. Three-point mounting according to DIN 43857-2; mounting dimensions 105 × 165 (139.5) mm.

Interfaces

INFO (customer interface)	Optical according to IEC 62056-21, on the front · 9600 Bd, 8-N-1
INFO protocol	SML 1.04, push mode (1 data set/s) · reduced or complete data set (PIN)
MSB interface	RS485 on terminals 27 (A) / 28 (B) (type B) or RS232 on RJ10 socket 4P4C (type C)
MSB protocol	9600 Bd, 8-N-1 · SML 1.04, push mode, manufacturer-specific data set
LMN interface	Via BAB-01 on the MSB interface (RS485 type B or RS232 type C) – to the Smart Meter Gateway according to BSI TR-03109, PTB-A 50.8, FNN specification
Tariff control	Potential-free terminals 13 / 15 or RJ10 socket; alternatively by LMN command (takes priority)

Standards & conformity

Measuring Instruments Directive (MID)	Directive 2014/32/EU
EU type-examination certificate (module B)	0120/SGS0338 · notified body 0598 · valid until 21.01.2028
Conformity assessment (module D)	0598-MID-D-22-066 · notified body 0598 · valid until 23.12.2028
EMC Directive	2014/30/EU
Metrological standards	EN 50470-1, EN 50470-3, IEC 62052-11, IEC 62053-21
Design & connection	DIN 43857-1, DIN 43857-2, DIN 43856
Data interfaces	IEC 62056-21, SML 1.04, BSI TR-03109, PTB-A 50.8
Legal metrology	Only the approved meter types with their respectively released software versions comply with legal metrology

CE · MID 2014/32/EU · class A · EMC 2014/30/EU

The EU declaration of conformity is available as a separate document. Manufacturer: Holley Technology Ltd., Hangzhou/China. Importer and distribution in Germany: DIINNO GmbH, Berlin.

Disposal

In accordance with Directive 2012/19/EU (WEEE), the meter and its electronic accessories must not be disposed of with household waste at the end of their service life. The devices must be collected separately and recycled in an environmentally sound manner.